ABSTRACT

[0689] The creation of a variety of upgradeable scalable switching networks are set forth including multistage switching networks as well as novel multidirectional architectures. Systems and methods exploiting the properties such as fault tolerance, upgradeability with out service disruption and path redundancy are incorporated into a variety of systems. A wide range of methods for upgrading and reconfiguration the scalable switching networks are presented including manifestations of implementations of said networks and said methods. Methods for designing new upgradeable scalable switching and the novel architectures derived thereof including architectures built from the redundant blocking compenstated cyclic group networks are set forth.